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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,732	10/23/2003	Kyung Jin Byun	51876P401	2404

8791 7590 07/20/2007  
BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
1279 OAKMEAD PARKWAY  
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EXAMINER
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STORM, DONALD L

ART UNIT	PAPER NUMBER
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2626

MAIL DATE	DELIVERY MODE
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07/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/693,732

Applicant(s)

BYUN ET AL.

Examiner

Donald L. Storm

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on October 23, 2003 through April 11, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 1-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. Papers submitted under 35 U.S.C. 119(a)-(d) were received October 23, 2003.

The applicant cannot rely upon the foreign priority papers to avoid or overcome a rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### *Specification*

2. The title is objected to because it is not sufficiently descriptive of the invention. A new title is required that is clearly indicative of the invention to which the claims are directed. See MPEP § 606.01. The Examiner suggests that the Applicant consider a title including these elements: "Codebook Search Method in CELP Vocoder Limiting Number of Search Trees in Algebraic Codebook."
3. The abstract is objected to because the abstract should not refer to purported merits or speculative applications of the invention and the abstract should not compare the invention with the prior art as in lines 1-3. See MPEP § 608.01(b).
4. The Examiner notes the possibility of informalities in the specification. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. The Applicant's cooperation is requested to consider correcting minor errors of which the Applicant may become aware during normal review and revision of the disclosure.  
  
In particular, at page 13, lines 16 and 17, should the words "potable" be --portable--? The change to --portable-- will not be regarded as new matter.

### *Claim Informalities*

5. Claim 1, and by dependency claims 2-6, are objected to under 37 CFR 1.75(a) because the meaning of the phrase "the method" (line 5) needs clarification. Because both a method for searching and a depth first tree method were previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase as --the method for searching--.

6. Claims 2-6 are objected to under 37 CFR 1.75(a) because the meaning of the phrase "The method" (line 1 of each claim) needs clarification. Because both a method for searching and a depth first tree method were previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase as --The method for searching--.

7. Claim 2 is objected to under 37 CFR 1.75(a) because the meaning of the phrase "below the track" (line 22) needs clarification. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase as --below the track--.

8. Claim 3 is objected to under 37 CFR 1.75(a) because the scope must be interpreted when the symbols making up the claim limitations are not defined in the claim. The symbols " $c_k$ " and " $c_k^t$ " (line 5) should be defined in the claims at least the first time used, if a concise and accurate definition is available. No new matter may be introduced into the disclosure as filed. Perhaps the later appearance of " $c_x$ " and " $c_x^t$ " resulted from typographical errors.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Byun et al.**

10. Claims 1-6 are rejected under 35 U.S.C. 102(a) and (b) as being clearly anticipated by Kyung Jin Byun, Hee Bum Jung, Minsoo Hahn, and Kyung Soo Kim, "A Fast ACELP Codebook Search Method," 2002 6<sup>th</sup> Int. Conf on Sign Proc., vol. 1, 422-425, 26-30 Aug. 2002. (Byun et al.).

11. For claim 1, see Section 3, Fig. 1, and their descriptions of stage 1 searching nodes of a tree to a certain level L, choosing and pruning trees, and stage 2 searching selected trees to determine final positions of pulses.

12. For claim 2, see Section 3, Table 1, and their descriptions of level L, maximum values for each track, the global maximum for fixing i0, i1 and nested loops for the next tracks and pulse pairs.

13. For claim 3, see Section 2, Equation (2), and their descriptions.

14. For claim 4, see Section 3, Table 1, Section 4, and their descriptions of level L, five tracks, eight positions, searching the next tracks and pulse pairs, and 4xLx(8x8).

15. For claim 5, see Section 4 and its description of Tx(4-L)x(8x8).
16. For claim 6, see Table 1, Section 4, and their descriptions of five tracks and {4xLx(8x8)}+{Tx(4-L)x(8x8)}.

***Conclusion***

17. Any response to this action may be mailed to:

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**or faxed to:**

(571) 273-8300, (for both formal communications intended for entry and for informal or draft communications, but please label informal fax as "INFORMAL" or "DRAFT")

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Some patent correspondence may be delivered by hand or delivery services, other than the USPS, addressed as follows and brought to U.S. Patent and Trademark Office, Customer Service Window, **Mail Stop Amendment**, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Division 2626, whose telephone number is (571) 272-7614. The examiner can normally be reached on weekdays between 7:00 AM and 3:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions

relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For general information about the PAIR system, see <http://pair-direct.uspto.gov>. If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 17, 2007

/Donald L. Storm/

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Primary Patent Examiner  
Division 2626